

REMARKS

In the Final Office Action mailed on August 12, 2005, all of the pending claims 1-29 were rejected. By the present Response, a single amendment to claim 1 is made simply to address the Examiner's concerns regarding the definiteness of that claim. If entered, the amendment would result in maintaining all of claims 1-29 pending. Applicants kindly request entry of the amendment and reconsideration of the claims in their present form.

Rejections under 35 U.S.C. §112

By response to the previous Office Action, claim 1 was amended with the intention of reciting a dimensional relationship essentially similar to that recited in claim 13, as supposed by the Examiner. The absence of the term "dimension" in claim 1 was an oversight. Accordingly, Applicants kindly request that the Examiner enter that word into claim 1 as indicated in the claims reproduced hereinabove. The rejection under 35 U.S.C. §112, second paragraph is believed to be obviated by that change.

Rejections under 35 U.S.C. §103

All the claims were rejected under 35 U.S.C. §103(a) as being unpatentable over Baumoel in view of Davidsen. The specific reasons for the rejections were said to be the same as those recited in the Office Action of April 21, 2005.

The references do not teach the dimensional relationships claimed.

As pointed out in the response to the former Office Action, which arguments are incorporated herein by reference, the combination proposed by the Examiner would not satisfy the size limitations and relationships set forth in independent claims 1, 13, 22 and 29. Specifically, the particular relationships between the sizes of the particles of acoustic absorbing material and the sizes of the elements of acoustic energy converting material are a result of much more than simple design choice. The inventors have found that the dimensional relationship permits the acoustical attenuative material to attenuate or absorb

energy at the particular wavelengths present in the claimed acoustic transducer. It has been particularly found that the attenuation of acoustic energy by acoustically attenuative materials such as that claimed can be non-uniform if the particle size of the acoustic scattering material in the acoustic absorbing material present was only based on the operating wavelength as taught by Baumoel. It has specifically been found that these should be a function of the dimensions of the transducer elements.

For example, if the size of particles of acoustically attenuative material exceeds that of the transducer elements, some particles may extend to multiple transducer elements, thereby producing non-homogeneous distribution of particles of acoustic scattering and absorbing materials across transducer elements. Hence, the particle size of the acoustic scattering and absorbing materials, according to the claimed invention, is smaller than the size of the transducer elements in order to ensure substantially homogeneously disbursed acoustic scattering and absorbing material in a matrix.

Baumoel contains no teaching whatsoever regarding such dimensional relationships. Indeed, Applicants consider the dimensional relationships to be critical to the proper operation of the claimed transducer. On the contrary, according to Baumoel, the acoustically attenuative material would be sized and selected based upon operating wavelength alone, without taking into account the size or dimensions of the acoustic scattering material.

Davidson does not cure the deficiencies of Baumoel regarding the teachings of the dimensional relationships discussed above. Indeed, by reference to the rejections formulated in the former Office Action, no specific reason for reliance upon Davidson can be found. The Davidson reference was merely cited for teaching a structure of a multi-element ultrasonic probe.

No suggestion or motivation to combine the references has been provided.

Furthermore, Applicants note that the current Office Action, like the former Office Action, provided no basis whatsoever for combination of Baumuel and Davidsen. To establish a *prima facie* case of obviousness, the Examiner must set forth some suggestion or motivation for the combination proposed, as well as some basis for believing that the combination would be successful for the claimed purpose. In the former Office Action, as well as in the current Office Action, the Examiner advanced *no basis whatsoever*, much less a reasonable basis, for the proposed combination. Indeed, Applicants can see no reason whatsoever why or how the teachings of the two references could or should be combined. The rejection is necessarily defective for this reason alone.

The Finality of the Office Action is Improper

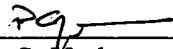
Finally, Applicants submit that the finality of the current Office Action is improper. The Examiner indicated in the current Office Action that the pending claims 1-29 were rejected for the same reasons as set forth in the previous Office Action. However, the previous Office Action rejected claims 1-12 based on Baumuel alone, and claims 13-27 based upon the combination of Baumuel and Davidsen. Accordingly, the current Office Action sets forth a rejection that is substantively different from that of the former Office Action. Applicants kindly request that the Examiner simply reissue a non-final Office Action to clarify the rejection so that they may be given an ample opportunity to respond.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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